NASA
Strategic Management Handbook

"The Red Book"

Strategic
Planning

Performance
Evaluation

Performance and
Implementation
Planning

NPG 1000.2
February 2000

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PREFACE

P.1   Purpose

NASA's Strategic Management System enables the Agency to establish strategy, make decisions, allocate resources, and manage programs safely, effectively, and efficiently—in ways that are consistent with NASA's strategic plans and performance plans. The purpose of this directive is to document that system. This directive includes:
a.   Strategic planning
b.   Implementation
c.   Performance evaluation
This directive also describes the strategic management roles and relationships of NASA's various organizational elements, from the Administrator to all NASA employees. NASA's Strategic Enterprises, Agencywide Functional Offices, and Crosscutting Processes are the framework for NASA's Strategic Management System.

P.2   Applicability

P.2.1   This NPG applies to NASA Headquarters and the NASA Centers, including Component Facilities, and to the Jet Propulsion Laboratory as provided in the contract.

P.2.2   Descriptions of policies, authorities, roles, and responsibilities for strategic management in this NPG supplement NPG 1000.3, "The NASA Organization."

P.2.3   Descriptions of Agency-level policies, processes, procedures, and guidelines specific to organizational activities and more detailed elements of strategic management are documented in the NASA directives system, Center-specific documentation, and the ISO 9000 documentation for NASA Headquarters and Centers. A description of the directives system can be found in NPD 1400.1, "NASA Directives System," and NPG 1400.2, "NASA Directives System Procedures and Guidelines."

P.3   Authority

42 U.S.C. 2473(c)(1), Section 203(c)(1), of the National Aeronautics and Space Act of 1958, as amended

P.4   References

a.   31 U.S.C. 1101–1119, 9703–9704, the Government Performance and Results Act of 1993, as amended

b.   31 U.S.C. 501–506, 901–903, 3511, et seq., the Chief Financial Officers Act of 1990, as amended

c.   40 U.S.C. 1401, et seq., the Clinger-Cohen Act of 1996 (Section 808 of Public Law (P.L.) 104-208, renaming, in pertinent part, the Information Technology Management Reform Act (Division E of P.L. 104-106))

d.   NPD 1000.1, NASA Strategic Plan

e.   NPD 1080.1, NASA Generate Knowledge (GK) Process for Programs and Projects

f.   NPG 1080.x, Guidelines for the Generate Knowledge Process for Programs and Projects

g.   NPD 1090.x, NASA Communicate Knowledge Process for Programs and Projects

h.   NPG 1090.x, Communicating NASA's Knowledge from Programs and Projects

i.   NPG 1000.3, The NASA Organization

j.   NPD 1400.1, NASA Directives System

k.   NPG 1400.1, NASA Directives System Procedures and Guidelines

l.   NPD 8700.1, NASA Policy for Safety and Mission Success

m.   NPD 7120.4, Program/Project Management

n.   NPG 7120.5A, NASA Program and Project Management Processes and Requirements

o.   NPD 8730.3, NASA Quality Management System Policy (ISO 9000)

p.   NPD 9800.1, NASA Office of Inspector General Programs

P.5   Cancellation

NASA Strategic Management Handbook (October 1996)

[Signed 1-19-00]

Daniel S. Goldin
Administrator

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CHAPTER 1
STRATEGIC MANAGEMENT SYSTEM

1.1   Overview

1.1.1   NASA consists of NASA Headquarters, nine Centers, the Jet Propulsion Laboratory (operated under contract to NASA by the California Institute of Technology), and several ancillary installations and offices in the United States and abroad. As a result of the Agency's decentralized operations, NASA's organization has evolved into a two-tiered structure of Agencywide management: (a) Agency management, including the Administrator, officials within the Office of the Administrator, and Functional Offices; and (b) Enterprise management, including Enterprise Associate Administrators and Center Directors. The implementation of NASA programs and aeronautical and space/Earth science and technology research occurs primarily at the Centers.

1.1.2   The success of NASA's missions relies in part on the Agency's four "Crosscutting Processes." These processes are the way we perform our mission. All activity within NASA is contained within one or more of these four processes: provide aerospace products and capabilities, generate knowledge, communicate knowledge, and manage strategically. Policies and procedural guidelines governing these Crosscutting Processes will be found in their respective NPD's and NPG's.

1.1.3   NASA's strategic management system is a set of ongoing and interlinked activities that includes strategic planning, implementation and performance planning, and performance evaluation. As shown in Figures 1–1 and 1–2, these activities enable the Agency to make decisions about its long-term goals, near-term activities, and institutional capabilities that are consistent with achieving the mission and objectives to which it commits itself in its Strategic Plan.

1.2   Strategic Planning

Strategic Planning establishes the direction for all Agency efforts and forms the basis for strategic and tactical decisionmaking, resource allocation, and capital investment. It does so in the context of the Agency's vision, mission, goals, objectives, values, and policies, as well as external and internal environments. The Strategic Planning process requires alignment among NASA's Strategic Plan, the Enterprise Strategic Plans, programs, and institutional capabilities (see Figure 1–2).

Figure 1–1. Strategic Management System
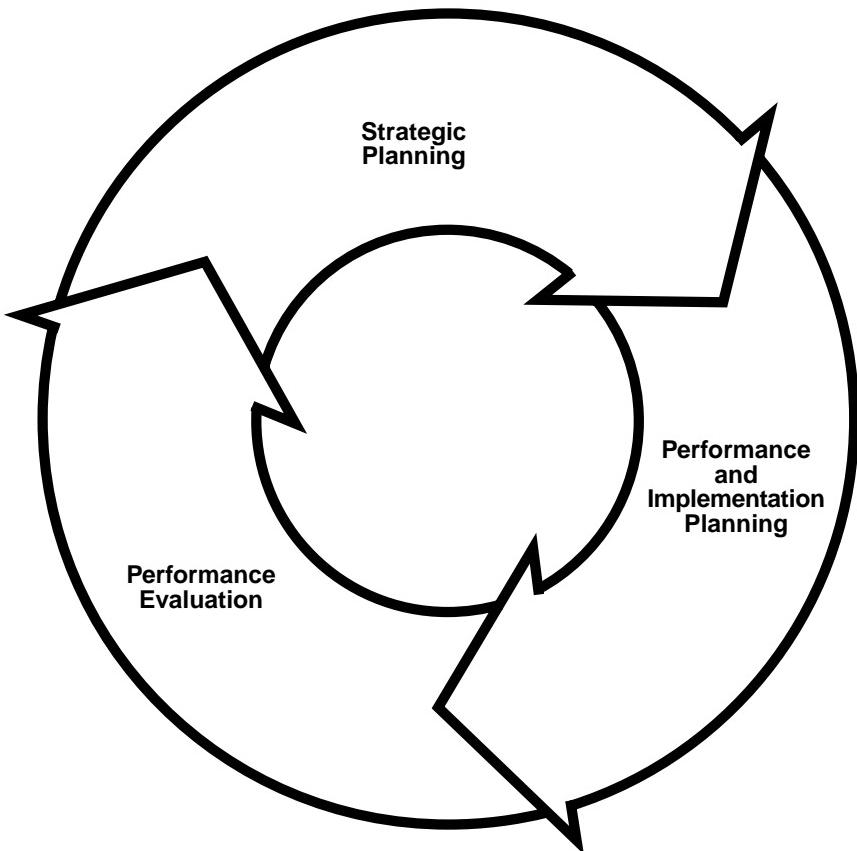
1.3   Implementation: Performance and Budget Planning

The implementation planning process produces annual budget formulation guidance and performance plans to achieve the goals and objectives identified during the Strategic Planning process. It is a cyclical process that is ongoing throughout the development of NASA's Strategic Plan and Enterprise Strategic Plans, capital investment plans, and Agency budgets and forms the basis for performance evaluation.

1.4   Performance Evaluation and Reporting

NASA's progress in achieving the objectives of its Strategic Plan is routinely evaluated by both internal and external organizations. The Government Performance and Results Act (GPRA) of 1993) requires Federal agencies to submit annual performance plans following the

Figure 1–2. Strategic Management Elements
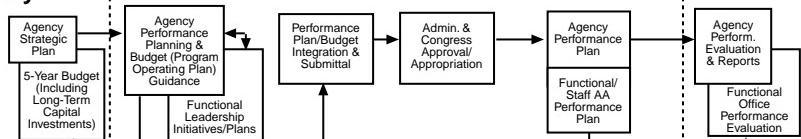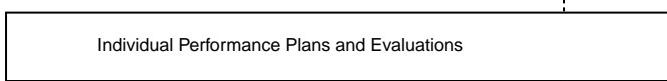
transmittal to Congress of the President's budget. NASA's performance report will reflect the performance goals against which the Agency expects its effectiveness to be measured in any given fiscal year.

1.4.1   Because investments in research and development can yield results 5, 10, and 20 years in the future, NASA's annual performance measures must incorporate measures of both output and outcome, addressing a longer term view than fiscal year by fiscal year. NASA will continue to rely on its internal management councils, its advisory committees, and the National Research Council for assistance in evaluating its performance over extended periods of time.

1.4.2   The performance evaluation process allows NASA to identify potential opportunities for improvement in program execution and process management and to ensure safety and health, efficiency, and effectiveness. Performance evaluation can also yield information that may indicate a need to change the Agency's long-term strategies or near-term objectives. NASA will report publicly on the results of its performance evaluations to the Administration and Congress in an annual performance report.

CHAPTER 2
ROLES AND RESPONSIBILITIES

2.1 Organizational Overview

NASA's organizational structure encompasses corporate, Agencywide management and the management of NASA's Strategic Enterprises. Strategic Enterprise management includes the management of NASA's Centers as well as programs and projects. A number of management councils and boards coordinate Agency planning. NASA's organizational structure is displayed in Figure 2–1 and is described in greater detail in NPG 1000.3.

2.2 Agency Management

Agency management is responsible for Agency leadership, the development of NASA's strategy, and the integrated management of the Strategic Enterprises. It is the external focal point for NASA communication and accountability, serving as the principal interface with the Administration, Congress, and oversight agencies. Agency management integrates the NASA budget, determines long-term institutional investment strategy, sets NASA policy and standards, and ensures Agency functional management. Agency management defines the Strategic Enterprises and is responsible for reviewing requirements, allocating resources, assessing performance, and setting investment

Figure 2–1. Agency and Enterprise Management Structure
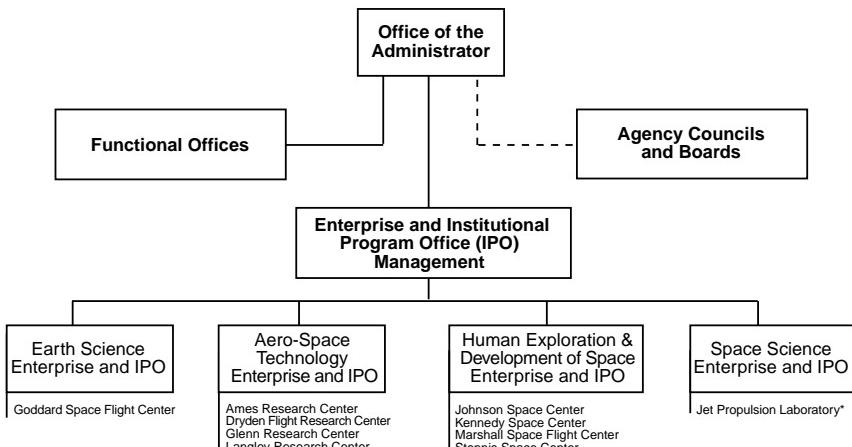
*   Wherever "Jet Propulsion Laboratory" or "JPL" appears in this document, note that the Jet Propulsion Laboratory (JPL) is NASA-owned, but contractor-operated.

goals across the Enterprises. Executive management authority for the Agency resides with the Administrator, Deputy Administrator, and Associate Deputy Administrator, advised and supported by the staff officials of the Office of the Administrator and the senior-level councils and boards chartered to perform Agency-level integration (see Figure 2–2).

2.2.1 *NASA Administrator*

The Administrator serves as NASA's chief executive officer, accountable to the President for the leadership necessary to achieve the Agency's mission. This leadership requires articulating the Agency's vision, setting its programmatic and budget priorities and internal policies, and assessing Agency performance. Senior staff officials within the Office of the Administrator include the Deputy Administrator, Associate Deputy Administrator, Chief Engineer, Chief Information Officer, and Chief Scientist.

2.2.2 *Senior Management Council*

NASA's Senior Management Council is chaired by the Administrator and consists of Associate Administrators, Officials-in-Charge of Headquarters offices, and Center Directors. This council advises the Administrator on the institutional health of the Agency and the status of its programs and plans and serves as a forum for the discussion of issues affecting Agency management. The council reviews the Agency and Enterprise Strategic Plans, Center Implementation Plans, and Functional Leadership Plans, and it recommends approval or redirection by the Administrator.

Figure 2–2. Agency Councils and Boards
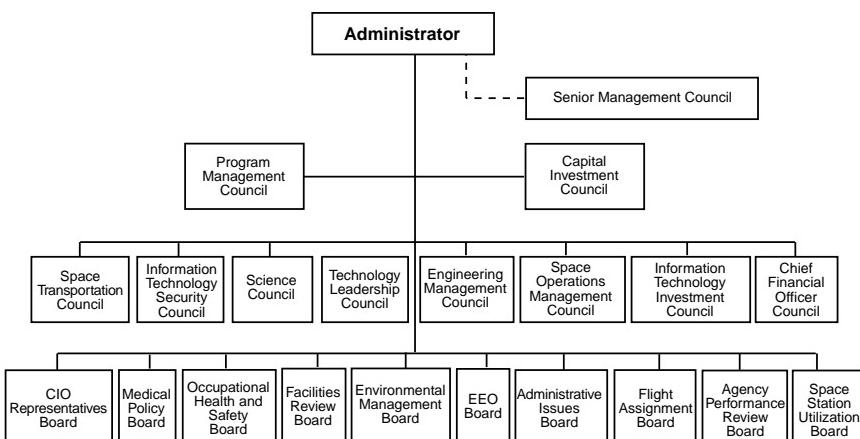
2.2.3   *Program Management Council (PMC)*

The PMC reviews the readiness of programs in formulation to proceed to implementation according to criteria established through the approval process. The PMC will also review the implementation of selected Enterprise programs and projects, as defined in the Program Commitment Agreement, and functional initiatives referred to it by the Capital Investment Council and requiring Program Commitment Agreements. The review of some programs may be delegated to Center Program Management Councils. The PMC's formal review process evaluates cost, schedule, technical content, performance, and safety to ensure that NASA meets its programmatic commitments.

2.2.4   *Capital Investment Council (CIC)*

2.2.4.1 The CIC examines Agencywide capital investments and policy issues. This includes the balance among Enterprise program investments, crosscutting technology investments, and institutional investments. The CIC ensures an Agency perspective for all large, long-term investments that enable the Agency and the Strategic Enterprises to execute their programs. Investment areas include:
   a.   Facilities
   b.   Environmental Management
   c.   Information Technology
   d.   Science
   e.   Technology
   f.   Human Resources
   g.   Safety and Occupational Health
   h.   Other designated investments

2.2.4.2 The CIC is the principal advisory group to the Administrator in resolving issues, prioritizing activities (capital investments, Functional Office initiatives, and programs), and balancing resources among the Strategic Enterprises. The CIC's advice to the Administrator is a significant element of the Agency's detailed implementation planning process and during the budget development process. The council resolves or recommends options to the Administrator on issues among the Enterprises, Functional Offices, and Centers, or combinations thereof, in terms of Agency investment in assets or functional capabilities. The council also reviews major Functional Office initiatives and reviews and recommends budget guidance initiating each annual budget cycle. When these reviews are required, the council will consider, among other criteria, the cumulative effect a proposed initiative will have on Agency resources. The Administrative Issues Board provides support for this review activity.

2.2.4.3 Significant augmentation of a Center of Excellence facility, human resource levels and skill mix, and proposals to change or designate new Centers of Excellence are all Agency investment decisions, on which the CIC makes formal recommendations to the Administrator.

2.2.5   *Other Councils of the Office of the Administrator*

The Administrator also has chartered the following councils, which are chaired by individuals from the Office of the Administrator or the Chief Financial Officer (CFO).

2.2.5.1 Science Council

2.2.5.1.1 The Science Council, chaired by the Chief Scientist, coordinates NASA's science activities, promotes public communication, and ensures the quality of the Agency's science program. This council advises the Administrator on all aspects of science related to NASA's flight and ground programs.

2.2.5.1.2 The Science Council serves as a forum for reviewing Agency policies, practices, and issues as they relate to science activities; communicating and discussing interdisciplinary science goals and the national and international policies that guide their development; and integrating science plans. The council also participates in the Agency's process of developing recommendations for Agency-level science priorities and budgets. It shares information about operational areas of the Agency's Strategic Enterprises as they relate to the quality and content of the science program.

2.2.5.2 Technology Leadership Council

The Technology Leadership Council, chaired by the Associate Administrator for Aero-Space Technology, advises the Administrator on all material aspects of technology related to NASA's flight and ground programs. It coordinates NASA's technology activities, including advanced research and development, across Enterprises and promotes public communication of NASA's technology programs. The Technology Leadership Council also serves as a forum for reviewing Agency policies, practices, and issues as they relate to technology activities, communicating and discussing technology goals and the national policies that guide their development, and integrating technology plans. The council participates in the Agency's process of developing recommendations for technology priorities across Enterprise budgets for technology and supports the CIC with recommendations for Center of Excellence designation.

2.2.5.3 Engineering Management Council

The Engineering Management Council, chaired by the Chief Engineer, is a forum for assessing and improving Agency engineering practices, policies, training and certification standards, procedures, and capabilities. When requested by the chair of the PMC or the Chief Engineer, this council conducts or supports independent technical reviews of NASA programs and technology/advanced development activities.

2.2.5.4   Space Operations Council

The Space Operations Council, chaired by the Chief Engineer, serves as a forum for assessing and improving Agency space operations policies, practices, standards, procedures, and capabilities, while providing Agencywide policy guidance for activities associated with NASA operations. This council also provides policy guidance and recommends issue resolution to the NASA space operations management organization that provides operational mission support to all NASA Enterprises.

2.2.5.5   Space Transportation Council

The Space Transportation Council, chaired by the Chief Engineer, advises the Administrator and coordinates all aspects of space transportation investments related to NASA's flight and ground technology programs. The council serves as a forum for establishing and reviewing Agency and interagency policies, practices, and issues related to space transportation requirements and technology development. The council also defines an investment plan necessary for space transportation technology development and system upgrades and participates in the Agency process of developing recommendations for transportation technology priorities and advanced development programs across the individual Enterprises.

2.2.5.6   Information Technology Investment Council

The Information Technology Investment Council, chaired by the Chief Information Officer, is responsible for establishing Agency-level information technology policies, plans, and standards. This council approves NASA's information technology plans and conducts reviews of proposed major information technology investments required to accomplish these plans. The council also serves as the supporting panel for information technology and provides recommendations on proposed information technology investments to the CIC. With the support of this council, the Chief Information Officer provides leadership and advice to the Administrator and other senior officials for information technology plans, policies, and standards, as well as for assessing returns on information technology investments in terms of mission outcomes or support.

2.2.5.7   Information Technology Security (ITS) Council

The ITS Council, co-chaired by the Chief Information Officer and the Chief Infrastructure Assurance Officer (currently the Associate Administrator for Management Systems), is responsible for the coordination of Agency unclassified and classified ITS efforts. With the support of this council, the Chief Information Officer and the Associate Administrator for Management Systems provide support and advice to the Administrator and other senior officials for ITS.

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2.2.5.8 Chief Financial Officer Council

The Chief Financial Officer Council, chaired by the CFO, is responsible for improving financial and resource management, strengthening communications, improving coordination, and promoting professional development. The council advises and coordinates the activities of the Agency on such matters as the development and implementation of financial and budget systems, the improvement of the quality of financial and resources information, financial data and information standards, management controls, professional development standards, and any other matters that will facilitate financial and resources management excellence.

2.2.6   *Internal Senior Management Boards*

To coordinate and support Agencywide management in certain key areas, NASA has established internal Senior Management Boards, which are chaired by one of NASA's Associate Administrators or, in selected cases, by a designated senior Agency official. These boards include, but are not limited to:
a.   Administrative Issues Board
b.   Agency Performance Review Board
c.   Chief Information Officer Representatives Board
d.   Environmental Management Board
e.   Equal Employment Opportunity Board
f.   Facilities Review Board
g.   Flight Assignment Board
h.   Integrated Financial Management Board
i.   Medical Policy Board
j.   Occupational Health and Safety Executive Board
k.   Space Station Utilization Board

2.3   Enterprise Management

NASA has established the four Strategic Enterprises to function in primary business areas for implementing NASA's mission and serving customers. Each Enterprise has a unique set of strategic goals, objectives, and implementing strategies that address the requirements of the Agency's primary customers.

2.3.1   *Enterprise Associate Administrators/Institutional Program Officers*

2.3.1.1 The Enterprise Associate Administrators are accountable for delivering program results to the NASA Administrator. As such, they serve as the stewards, advocates, and chief executives of their respective Enterprises, setting Enterprise priorities and strategies for achieving them. In addition, the Strategic Enterprises provide program definition (requirements, opportunities for cross-program efficiency, and synergy). They are responsible for the safety and human health of their

Enterprise's activities, integrated Enterprise budget development, program resource allocation, performance assessment, policies and standards, and the implementation of NASA policies.

2.3.1.2   The Enterprise Associate Administrator is the senior official in the Enterprise with principal responsibility for developing long-term strategy and ensuring that the necessary capabilities are in place to meet both the near-term program objectives and the longer term goals.

2.3.1.3   As the Enterprise leader, the Associate Administrator determines what the Enterprise does and why, with a specific focus on the requirements of external customers. In this context, the Enterprise Associate Administrators are responsible for:
    a.   Developing Enterprise strategy, policy, and standards that fulfill the Agency's goals and objectives
    b.   Formulating program requirements and objectives
    c.   Providing advocacy for the Enterprise
    d.   Providing external/customer interfaces
    e.   Allocating resources for the full cost of each program, including personnel and facilities, within the context of Agency strategic determinations
    f.   Assessing program performance
    g.   Selecting projects
    h.   Serving as the NASA "internal customer"
    i.   Making Lead Center assignments for the Administrator's approval
    j.   Overseeing Enterprise education and public outreach
    k.   Coordinating interactions between the Office of Management and Budget and NASA's Office of the Chief Financial Officer
    l.   Coordinating interactions between Congress and NASA's Office of Legislative Affairs
    m. Coordinating all international partnership arrangements with the Office of External Relations

2.3.1.4   The Associate Administrators for Space Science, Earth Science, and Life and Microgravity Sciences and Applications have oversight of NASA's scientific research programs. These Associate Administrators' responsibilities in science research include strategic planning, implementation and performance planning, the selection of missions and investigations, and the ongoing evaluation of research activities. The Associate Administrator for Life and Microgravity Sciences and Applications is also responsible for all Agency health activities. Enterprise Associate Administrators are responsible for managing program initiation, formulation and integration, science management, and program oversight and performance assessment. The Centers are responsible for program implementation on behalf of their respective Enterprise Associate Administrator (see Figure 2–3).

Figure 2–3. Science Management Roles and Responsibilities

Roles and Responsibilities	Strategy	Implementation	Evaluation
Chief Scientist	• **Science Policy Development**	• Consult on Science Enterprises' Planning, Programs, and Budgets	• Assess Effectiveness of Policies and Integrated Science Results
Enterprise Associate Administrator	• **Develop Enterprise Strategy** • **Develop Science Plan** • **Establish Program Requirements** • **External Advocacy** • **External Coordination**	• **Advisory Committee Interface** • **Cross-Enterprise/Agency Coordination** • **Allocate Research/Program Budgets** • **Establish Science Priorities** • **Develop Research Campaigns** • **Select Research/Mission Proposals** • **Oversee International Partnering**	• Assess Compliance and Performance Against Strategic Plan • Integrate Research Results • Program Assessment
Center Scientist	• Contribute to Science Plan Development	• Develop Project Science Plans with the Science Community • Support External Investigations • Project Scientist Management • Conduct Successfully Proposed Research	• **Support Program Evaluation**
Lead Center*/ Program Manager	• Support Program Definition • Assess Technology Readiness	• Develop Mission Alternatives • Manage Program Planning • Establish Project Structure • Manage Execution	• **Support Program Evaluation**
* When required for enabling technology programs and flight and ground system development programs			

Note: Bold type reflects primary management responsibilities.

2.3.1.5   When a Strategic Enterprise consists of multiple Headquarters organizations, a Lead Associate Administrator is appointed who is responsible for setting policy and requirements guidance for that Enterprise. The Associate Administrator for Space Flight is the Lead Associate Administrator for the Human Exploration and Development of Space (HEDS) Enterprise and is responsible for an integrated human exploration and development of space strategy. The Associate Administrator for Life and Microgravity Sciences and Applications reports to the NASA Administrator and is a key member of the HEDS Enterprise. In this instance, the Associate Administrator is not an Enterprise Associate Administrator, but has the full responsibilities of an Enterprise Associate Administrator for programmatic activities in the areas of life sciences, agency health activities, microgravity sciences, and associated space product and commercial development.

2.3.1.6   To ensure alignment between programs and institutional capabilities, the Administrator will normally designate the Enterprise Associate Administrator for the predominant activity at each Center that Center's Institutional Program Officer. As an Institutional Program Officer, the Associate Administrator is responsible for ensuring that the Center has the capability to meet its programmatic and functional commitments, as well as long-term mission responsibilities, in a safe and effective manner. The Institutional Program Officer/Associate Administrator is also responsible for implementation, conformance, and the assurance of safe and efficient functional operations. Enterprise Associate Administrators serving as Institutional Program Officers must have a broader perspective than their individual Strategic Enterprises. In this management capacity, the Institutional Program Officer works with the Centers, other Enterprise Associate Administrators, and Functional Offices to:

a. Provide safe and healthful workplaces and environmentally sound work processes
b. Plan long-term institutional strategies
c. Determine institutional and infrastructure investment requirements
d. Pursue integration and synergies, crosscutting strategies, and investments across multiple Centers
e. Approve institutional budgets proposed by the Center
f. Develop a long-term institutional investment strategy
g. Determine major adjustments to and tradeoffs among the programs and institutions within overall budget availability
h. Assess the performance of the Center in meeting its mission and Center of Excellence responsibilities
i. Review Functional Office initiatives, as a member of the Administrative Issues Board.

2.3.1.7 Each Institutional Program Officer also ensures a broad perspective by providing the opportunity for all the Enterprises that have work at the Center to participate in institutional decision processes. These process-es encompass policy decisions, allocation of common resources, approval of the Center's institutional operations budgets, and recom-mendations on proposed capital investments, including determining fund sources.

2.3.2 *Centers and Center Directors*

NASA's Centers are responsible for the safety and occupational health of their workforce and for the safe implementation of the Agency plans, programs, and activities of the Strategic Enterprises. Centers of Excellence and Center missions are two key concepts in the manage-ment of NASA. NASA's Center Directors are responsible for program management and execution. They determine how Enterprise programs and central services will be implemented. Center Directors manage the institution (including capability development and maintenance), man-age multi-Enterprise resources, implement functional leadership and central service activities, and implement NASA, Strategic Enterprise, and Agency-level functional policies. In collaboration with Agency-level Functional Offices, the Center Directors will establish oversight and evaluations of Center functions through self-assessments, ISO 9000 audits, performance metrics, or other requirements identified. The Center Directors serve as both members of the Senior Management Council and as heads of their respective Centers. In this latter role, they have primary management responsibility in three areas: program man-agement (determining how programs are accomplished), institutional infrastructure (maintaining and enhancing both human and physical resources), and the assurance of the Agency's capabilities in assigned Centers of Excellence.

2.3.2.1   Center Missions

Center missions identify the primary area of concentration of each Center's capabilities. A Center mission is a long-term responsibility. The Center Directors are responsible for building and maintaining human and physical resources to support their Centers' missions. Enterprise program and project assignments are based on mission designations. The Administrator assigns the Center missions. In implementing its mission, the Center may capitalize on capabilities residing at supporting Centers or outside of NASA, as necessary, to provide the cost-effective implementation of its mission. Designated Center Mission Areas and Centers of Excellence are listed in Appendix A.

2.3.2.2   Lead Center Directors for Programs

2.3.2.2.1 Each NASA program involving more than one Center is assigned to a Lead Center for implementation. NASA program Lead Center assignments are selected by the Enterprise Associate Administrator and approved by the Administrator. In making such assignments, the Enterprise Associate Administrators will consider Center mission and Center of Excellence responsibilities. (Lead Center designations for NASA's current programs are listed in Appendix C.) Lead Center Directors have full program management responsibility and authority. They are fully accountable for ensuring that assigned programs are managed to agreed-on schedule milestones, budget guidelines, technical requirements, and all safety and reliability standards.

2.3.2.2.2 The Enterprise Associate Administrators must configure each program so that it can be efficiently and effectively accomplished within the framework of Lead Center assignments and funding allocations. The level and number of Enterprise Associate Administrator–controlled requirements must be consistent with safety, mission success, customer expectations, and statutory and regulatory requirements. The Lead Center Directors, in turn, establish supporting assignments for other Centers (Supporting Centers), considering Center mission and Center of Excellence responsibilities. The Center Directors delegate management responsibility to the Program Managers who report to them.

2.3.2.3   Centers of Excellence

2.3.2.3.1 Center of Excellence designation represents exceptional Agency capabilities in certain areas of science, engineering, or technology. These capabilities include personnel, facilities, and tools and may reside at more than one NASA Center. The exceptional capabilities a Center of Excellence represents are expected to serve the needs of the Enterprises as well as NASA's strategic objectives, and they are the responsibility of the Center Director.

2.3.2.3.2 A NASA Center designated as a Center of Excellence is responsible for planning and, as permitted by available resources, maintaining or augmenting the personnel skills, facilities, and tools required to sustain its area of excellence. A Center of Excellence's implementation plan must be prepared at the Center and approved by that Center's Enterprise Associate Administrator/Institutional Program Officer. It will include strategies for advocating, coordinating, collaborating among, and, where cost-effective, consolidating Agency capabilities supporting a particular Center of Excellence designation. Agency investment decisions in such areas as facilities development, human resource levels, and skill mix will consider and support such consolidations.

2.3.2.3.3 The Institutional Program Officer is responsible for ensuring the viability of the Centers of Excellence in keeping with NASA's Strategic Plan. Normally, Center of Excellence issues, including plans to cover resource shortfalls, will be resolved at the Strategic Enterprise/Institutional Program Office level. However, significant adjustments in Center of Excellence assignments, personnel levels or skills, facilities, funding, and tools are all Agency investment decisions to be recommended to the Administrator by the CIC, supported for this purpose by the Technology Leadership Council.

2.3.2.3.4 Proposals to change or to designate new Centers of Excellence will be based on annual assessments conducted by the Center Director, as well as on reviews involving corresponding external expertise, which must be conducted every 3 years. Criteria used in assessments and reviews of Centers of Excellence will include record of performance, competitiveness with external sources of equivalent capabilities, adequacy of resources, and extent of support for NASA's Enterprises and strategic objectives.

2.3.2.4 Program and Project Managers

The Program Manager ensures the most expeditious and cost-effective implementation approach for a program, consistent with safety and taking into account Center of Excellence capabilities and Center mission assignments. Program Managers are selected by, and report to, the Lead Center Director. If more than one project exists within a program, they are managed by Project Managers who report to the Program Manager. Project Managers are selected by the responsible Center Director. A general model for the roles and responsibilities for Strategic Enterprise program management is shown in Figure 2–4. For programs and projects covered under NPD 7120.4 and NPG 7120.5, refer to these documents for the detailed responsibilities and procedures for specific program and project managers.

2.3.2.5 Center Scientists

While overall science management and direction resides with the science Enterprise Associate Administrators, as discussed in section 2.3.1,

Figure 2–4. Enterprise Program Management Roles and Responsibilities

Roles and Responsibilities	Strategy	Implementation Planning	Implementation and Evaluation
Enterprise Associate Administrator	• **Develop Enterprise Strategy** • **Customer Interface** • **Establish Program Requirements/Metrics** • **External Advocacy** • **Long-Term Investment Strategy** • **Formulate Programs**	• Coordinate Cross-Enterprise Activities • Integrate Enterprise Programs • Select Projects and Lead Centers • Allocate Budget to Programs • Approve Implementation Plans	• Assess Compliance and Performance Against Program Requirements and Customer Expectations
Lead Center Director*	• Integrate Strategies with Institutional Capabilities • Develop Centers of Excellence Strategies	• **Integrate Institutional Resources with Program Needs** • **Develop Implementation Plans (Total Center)** • **Coordinate Cross-Center Activities** • **Select Program Manager**	• Ensure Compliance to Policy/Standards • Maintain Dual Path for Quality and Independent Assessment
Program Manager	• Support Headquarters Formulation • Conduct Feasibility Planning	• **Manage Program Planning** • **Develop Program Resource Needs** • **Establish Project Requirements and Performance Metrics** • **Balance Requirements/Resources**	• Implement Programs • Allocate Budgets to Projects • Project Oversight • Report Status • Control Program Changes
Project Manager	• Develop Specific Proposals • Innovate • Assess Technology Readiness	• Develop Alternatives • Establish Contracts and Support Agreements	• **Implement Projects** • **Administer Contracts** • **Manage Supporting Tasks** • **Report Metrics**

Note: Bold type reflects primary management responsibilities.

* Center Directors with projects supporting programs perform functions similar to those of lead Center Directors, but at the project level at their individual centers.

flight and ground systems development and operations management responsibilities are delegated to the Centers. NASA's Center scientists provide enabling support to the broader space research community by serving as project scientists and operating unique Center facilities. In addition, Center scientists may compete with external researchers for funding to conduct original research of their own (including instrument development) that also maintains their scientific currency. Agency policies and guidelines for science program management are provided in NPD 1080 and NPG 1080, currently under development.

2.4   Functional Management

2.4.1   The Headquarters Functional Office Associate Administrators and Officials-in-Charge are the Administrator's principal advisors for their areas of responsibility. They establish plans to improve functional performance across the Agency, disseminate internal Agency policies, and, in collaboration with the Enterprise Associate Administrators and Center Directors, maintain sufficient insight into Enterprise and Institutional Program Office activities to ensure that they are conducted in accordance with all statutory, regulatory, and fiduciary responsibilities. In addition, these officials advise the Administrator and senior managers of potential efficiencies and required compliance to be gained by implementing proposed functional initiatives.

2.4.2   Headquarters Functional Offices include the Offices of the Chief Financial Officer, Chief Engineer, Chief Information Officer, and Chief Scientist, as well as Headquarters Operations, Equal Opportunity Programs, Human Resources and Education, General Counsel,

Procurement, External Relations, Management Systems, Small and Disadvantaged Business Utilization, Legislative Affairs, Public Affairs, Safety and Mission Assurance, and Policy and Plans. The Associate Administrator for Management Systems serves as the Agency's Chief Infrastructure Assurance Officer.

2.4.3   Functional Office activities fall into any or all of three major categories: functional leadership, staff to the Administrator, and central services across the Agency. The Office of Headquarters Operations will be responsible for matters pertaining to the planning, execution, and eval-uation of the management of the Headquarters institution. Figure 2–5 is an overview of NASA's Functional Office roles and responsibilities.

2.4.3.1 As functional leaders, Functional Office Associate Administrators and Officials-in-Charge focus on improving processes, stimulating efficiency in the performance of activities related to the programs, and providing consistency, when consistency serves Agency management objectives, across the Strategic Enterprises. They oversee the perform-ance of their particular functions across all of the Centers, as well as pro-vide liaison to external organizations performing similar functions and stakeholders who establish Governmentwide policy and requirements.

Figure 2–5. Functional Office Roles and Responsibilities

	Functional Leadership	Staff to the Administrator	Central Service
Intent	• Efficiency • Effective Support to Agency Mission	• Cross-Enterprise Balance and Synergy • Ensure Consistent Message to External Customers • Statutory Compliance and Accountability	• Efficiency
Products	• Policy/Standards • Budget Guidance • Functional Leadership Plans • Assessments/Reports Improvements • Standards and Architecture • Training	• Recommendations • Assessments and Reports • Communiqués • Functional Initiatives	• Discrete Service • Enterprise Staff Support
Customer	• Enterprises/Centers	• Administrator	• Enterprises/Centers
Principal Activities	• Coordination and Integration • Establish Policies • Insight and Review • Internal Focal Point • External Liaison • Analysis and Reporting • Facilitate Standards Development • Facilitate Capital Investment	• Coordination and Planning • External Liaison • Analysis and Reporting • Independent Assessment • Functional Initiative Sponsorship and Direction	• Requirements Determination and Consolidation • Assessment • Support
Mode of Operation	• Value-Added Policy and Standards • Extensive Involvement of Customers and Stakeholders, Including Enterprises and Centers	• Independent Reporting to Administrator, Coordinated with Enterprises as Appropriate	• Customer Responsiveness • Co-located (Staff Only) • Negotiate Implementation Plans • Negotiate Performance Plans
Examples	• Human Resources Planning • Development of NASA's Financial Management Planning System • Environmental Management and Coordination • Facilities Management	• Coordinating Public Affairs Activities and Events • Legislative Hearing Coordination • Agency Strategic and Performance Plan Development	• PAO (Headquarters Only) • Communications Network • Agency Training and Education

2.4.3.2   Central services for specific functional activities are offered to gain efficiencies and to eliminate redundancy across the Agency. The decision to provide a function centrally (for example, Agencywide payroll processing) is made by the Administrator, on the CIC's recommendation, on a case-by-case basis showing a clear benefit to the Agency. A Functional Office or Strategic Enterprise may provide central services. Such services include staff support, training, internal communications, and consolidated mainframe computing operations. The CIC will recommend a control mechanism (such as a memorandum of understanding) for the service provision. Once established, the service provision will be evaluated annually as part of the budget process and continued on the basis of cost-effective support to Agency customer requirements.

2.4.3.3   Principal Centers may be established to lead particular functional leadership operations. The Functional Office selects the Center that can best execute the function on behalf of NASA and submits that selection, with the concurrence of the Institutional Program Office Associate Administrator and the Associate Administrator for Headquarters Operations, to the Deputy Administrator for approval. Delegations of authority to conduct these responsibilities are negotiated and documented with memoranda of understanding, signed by the Functional Office Associate Administrator or Official-in-Charge, the Institutional Program Office Associate Administrator, the Associate Administrator for Headquarters Operations, and the Center Director. The memoranda of understanding must contain provisions for direction and funding flow, as well as performance review. The Principal Center Director, in turn, may establish supporting assignments for other Centers (Supporting Centers) considering their particular functional capability. The memoranda of understanding must stipulate that budget processes will follow guidance provided by the Headquarters Office of the Chief Financial Officer and Office of Headquarters Operations. (Principal Center designations for NASA's current programs and processes are listed in Appendix B.)

2.5   Crosscutting Process Management

2.5.1   NASA recognizes that the broad application of certain operating principles can enhance the returns on its work toward diverse programmatic and functional objectives. As a framework for operating in accordance with these principles, NASA has grouped the following major activities into four "Crosscutting Processes":
a.   Manage Strategically
b.   Provide Aerospace Products and Capabilities
c.   Generate Knowledge
d.   Communicate Knowledge

2.5.2 The Administrator assigns stewardship responsibilities for the Crosscutting Processes. These responsibilities have been assigned to: Associate Administrator for Policy and Plans—Manage Strategically
Chief Engineer—Provide Aerospace Products and Capabilities
Chief Scientist—Generate Knowledge
Chief Scientist—Communicate Knowledge

2.6 Manage Strategically

2.6.1 No NASA organization can succeed for long unless NASA succeeds. Interorganization coordination and collaboration are essential to defining common strategic goals and operating principles, implementation planning, and achieving mission success. To bring about Agencywide coordination and collaboration among all of its organizational units, the Agency designed the Strategic Management System that is described in this NASA Procedures and Guidelines directive (NPG 1000.2).

2.6.2 The stewardship of NASA's strategic management process is the responsibility of the Office of Policy and Plans. The process is implemented by all NASA organizations as indicated in this directive (NPG 1000.2).

2.6.3 The scope of NASA's commitment to managing strategically is far-reaching and all-inclusive. The process includes the roles and responsibilities of Agency and Enterprise management as well as Functional Offices (see NPG 1000.3).

2.6.4 The Office of Policy and Plans is responsible for scheduling and coordinating an orderly, well-documented, and inclusive Agency process to update every 3 years the Agency's Strategic Plan and, as needed, its strategic management guidelines (NPG 1000.2). This office also collaborates with the Office of the Chief Financial Officer to define and apply assessment tools to evaluate its performance.

2.7 Provide Aerospace Products and Capabilities

NASA conducts aerospace programs to provide aeronautical and space technology to researchers, industry, and the general public. Provide Aerospace Products and Capabilities is NASA's process for delivering systems (for example, aeronautics, space and ground), technologies, data, and operational services to NASA customers. Management policies, procedures, and guidelines for the formulation, approval, implementation, and evaluation of NASA programs and projects are provided in NPD 7120.4 and NPG 7120.5.

2.8   Generate Knowledge

NASA conducts and supports basic and applied research to extend the boundaries of knowledge of science, technology, and engineering, to capture new knowledge in useful and transferable media, and to share new knowledge with customers. This Crosscutting Process provides a framework for ensuring that the research is consistent with the Agency's strategic plans and that the quality of the research is maintained to the highest standards. Directives and guidelines for the Generate Knowledge process will be in NPD 1080.x and NPG 1080.x.

2.9   Communicate Knowledge

The Communicate Knowledge process coordinates, integrates, dissemi- nates, and shares consistent information and experiences about the con- tent, relevance, results, applications, and excitement of NASA's mission of research, development, education, and exploration. This process will be described in greater detail in NPD 1090.x and NPG 1090.x.

2.10   NASA and Its Employees: Mutual Responsibilities

The success of NASA's strategic plans, performance plans, and Strategic Management System, depends on the active support of all Agency employees. NASA management conducts the Agency's plan- ning activities in an inclusive, open, and well-documented manner. All employees, including managers and executives, are responsible for familiarizing themselves with their respective Agency, Enterprise, Functional Office, and Center plans. NASA makes an investment with each employee. Employee development is an essential form of capital investment for the Agency.

2.11   Office of Inspector General

NASA's Office of Inspector General (OIG) is an independent organiza- tion with responsibility to detect fraud, waste, abuse, and mismanage- ment, while promoting economy, efficiency, and effectiveness in the Agency's programs and operations. The OIG conducts audits, criminal investigations, inspections, and assessments. The OIG staffs are locat- ed at NASA Headquarters, all NASA Centers, the Jet Propulsion Laboratory, and some ancillary offices. Additional information about OIG activities can be found in NPD 9800.1.

CHAPTER 3
STRATEGIC PLANNING

NASA's purpose as an Agency of the U.S. Government is defined by its enabling statute, the National Aeronautics and Space Act of 1958, as amended. This and other Federal statutes and regulations elaborate on the kinds of programs Congress and the President have directed NASA to carry out, as well as the regulations that govern how NASA manages the national resources entrusted to it by the American people. Not long after it was established, the Agency undertook the first in a series of long-range plans to ensure that it used those resources effectively, not only to meet current expectations, but also in anticipation of future needs. These long-range plans evolved into the NASA Strategic Plan.

3.1   The Government Performance and Results Act of 1993

In 1993, Congress passed the Government Performance and Results Act (GPRA) to "improve the confidence of the American people in the capability of the Federal Government, by systematically holding Federal agencies accountable for achieving program results . . . [by] setting program goals, measuring program performance against those goals, and reporting publicly on their progress." GPRA requires the following of Federal agencies (including NASA):

a. Develop periodic Agency strategic plans, setting forth NASA's mission, long-term goals, and associated resource requirements. The Strategic Plan is to "cover a period of not less than 5 years forward from the fiscal year in which it was submitted." Updated Strategic Plans must be submitted every 3 years.

b. Prepare and submit to the President and Congress annual performance plans that establish performance goals, measurable objectives, and associated resources required to achieve long-term goals.

c. Submit annual performance reports that "set forth the performance indicators established in the Agency performance plan . . . along with the actual program performance achieved." When performance goals have not been achieved, explanations should be provided, along with plans for meeting the unattained goals, or reasons for revising performance goals.

3.2   NASA Strategic Planning Requirements

In response to GPRA, the Strategic Plans developed for the Agency and the Strategic Enterprises will contain:

a. A comprehensive mission statement covering NASA's major functions and operations

b. General goals and objectives, including outcome-related goals and objectives, for major functions and operations

c. A description of how the goals and objectives are to be achieved
d. An identification of those key factors, external to the Agency and beyond its control, that could significantly affect the achievement of the general goals and objectives
e. The program evaluations used in establishing or revising general goals and objectives

3.3 NASA's Strategic Plan

NASA's Strategic Plan articulates the Agency's vision, mission, goals, and objectives, as well as Agencywide strategies for achieving them. In so doing, it gives direction to the work of all NASA organizations and employees. Strategic planning is a continuous process. NASA's Strategic Plan is fully reviewed and updated at least every 3 years. Interim adjustments may be made as needed, in parallel with the annual performance planning process (see Figure 3–1).

3.4 Enterprise Strategic Plans

Enterprise Strategic Plans will elaborate on their respective mission and goals, in alignment with NASA's Strategic Plan, with detailed objectives, implementing strategies, and brief descriptions of their principal programs and/or processes. They must be signed by their respective Enterprise Associate Administrators. Enterprise Strategic Plans will be reviewed by the Office of Policy and Plans for consistency with NASA's Strategic Plan and other Enterprise Strategic Plans. Enterprise Strategic Plans are reviewed by the Senior Management Council and approved by the Administrator. To ensure that they remain current, Enterprise plans will be reviewed and updated as part of any update to the NASA Strategic Plan, but in any event, not less than every 3 years.

3.5 Capital Investment Planning

3.5.1 NASA has established an Agencywide capital investment planning process because the size, scope, time horizon, and technical nature of these investments are critical to long-term Agency viability. In addition, such investments must be balanced across NASA organizations and prioritized on an Agencywide basis, consistent with external financial constraints and partnership opportunities. This planning process also supports NASA compliance with related Federal guidance on capital/asset investments (Office of Management and Budget (OMB) Circular A-11, Part 3).

3.5.2 Capital investment planning represents a key activity in the strategic management process and an important element of NASA's 5-year financial planning and budget activities. NASA's Capital Investment Council (CIC) advises the Administrator during preparation of the Agency's Program Operating Plan (POP) guidance at the beginning of the

Figure 3–1. NASA Strategic Planning and Budget Schedule for FY X
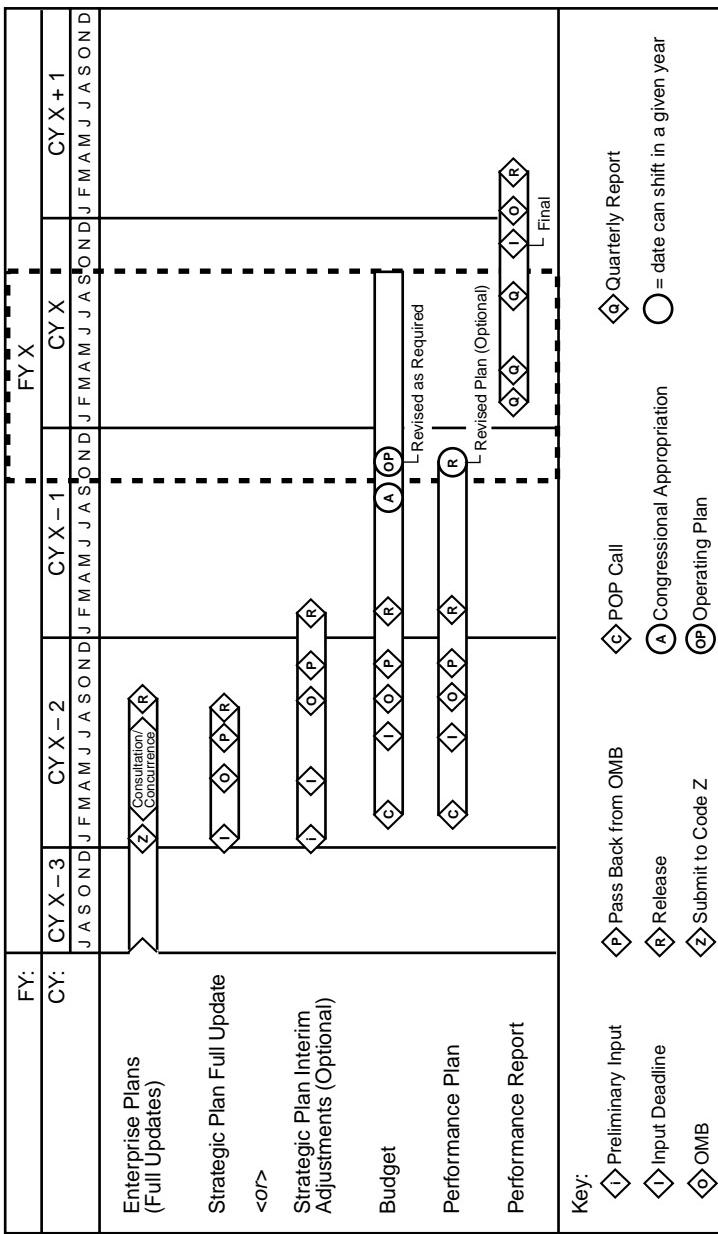
implementation planning process and during the annual budget development process. The council meets as often as the chair deems appropriate. Its meetings will examine interrelated Agencywide issues, such as information technology and security, critical infrastructure protection, human resources, technical capabilities, high-risk generic technologies, Functional Office initiatives, and facilities.

3.5.3   The CIC ensures the integration of Enterprise, Center of Excellence, and other investment plans; it reviews and recommends investments and provides guidance to NASA entities for subsequent implementation. The council also examines such proposals as Agency-level downsizing or restructuring.

3.6   Functional Office Planning

3.6.1   The Functional Offices formulate Functional Leadership Plans, with Enterprise support, to implement the Agency's Strategic Plan, improve Agency management, and respond to new external direction. A Functional Leadership Plan establishes the overall purpose and direction of functional activities, including goals, objectives, and performance metrics or indicators used to assess success. It is based on the Enterprise Strategic Plans, self-assessments, and externally mandated requirements. Each plan must include a general description of proposed and statutorily required functional initiatives deemed necessary to implement the Agency Strategic Plan and statutory mandates. The Senior Management Council must receive a presentation of and concur with the Functional Leadership Plans, and then the Administrator must approve them. The plans are updated, reviewed, and approved again as required by the Administrator.

3.6.2   Following presentation to and concurrence with the Functional Leadership Plans by the Senior Management Council and approval by the Administrator, decision and guidance are to be documented for inclusion in the NASA POP guidance and, in the case of new policies, for formal coordination and dissemination. The Functional Offices also ensure that the appropriate metrics or performance indicators are developed to evaluate function performance.

CHAPTER 4
IMPLEMENTATION PLANNING

4.1   Performance and Budget Planning Process

Implementation planning ensures that the detailed planning, resources, and performance expectations are aligned to support the achievement of the NASA and Enterprise Strategic Plans. Implementation planning is based on the previous cycle of NASA and Enterprise Strategic Plans, capital investment planning, the 5-year Agency budget, and the results of the ongoing performance evaluation process. Essential elements of implementation planning include program planning to establish technical, schedule, and cost, as well as performance criteria at all management levels. NASA's budget planning process is the vehicle for integrating these implementation plans.

4.2   Five-Year Budget Planning Overview

4.2.1   NASA's budget planning is an ongoing process that incorporates a detailed analysis of current requirements with outyear projections of funding needs. Each budget cycle is initiated by guidance from OMB that includes planning estimates, as well as policy guidance for the preparation of the Agency's budget request. This broad guidance uses the 5-year runout of the President's budget request for NASA before Congress at the time, and it updates the total to reflect further economic policy or program decisions that may have been made.

4.2.2   Agency guidance for allocations among the Strategic Enterprises, priorities for decisionmaking and tradeoffs, and any broad strategy issues are developed to initiate both the internal planning and budget processes. The Administrator issues this guidance, with full participation and advice of the CIC, through the Agency CFO. The CFO and Comptroller then integrate the Administrator's guidance with more detailed programmatic and funding guidance provided by the Strategic Enterprises and the Functional Offices. The multiyear budget estimates, program assumptions, and strategic direction establish a baseline for planning and budget formulation activities and are distributed as guidelines to the NASA Centers.

4.2.3   Responding to Program Operating Plan (POP) guidance from the CFO, the Centers assess their program planning and develop integrated resource requirements with the assistance of their respective Institutional Program Offices. They review these requirements with the Lead Centers and incorporate Lead Center decisions. The Lead Centers submit integrated resource recommendations to their Enterprise Associate Administrators and Institutional Program Officers

for integration into the Agency's annual submission of its 5-year budget. Coordination among the Strategic Enterprises and the Functional Offices enables a comprehensive Agency budget submission that is reflected in Program Commitment Agreements, Program and Project Plans, and institutional planning.

4.2.4   As the budget formulation process proceeds, decisions must be made about activities that have been formulated—for example, whether they can be afforded within the guideline level and those that will be proposed as over-guideline activities. Each Strategic Enterprise must justify the relevance of the requested programs to the NASA and Enterprise Strategic Plans. New initiative candidates must be prioritized. The approval of such initiatives for inclusion in the Agency budget generally is subject to their having reached an appropriate stage of maturity in the formulation processes outlined in NPG 7120.5, as applicable.

4.2.5   In their capacity as principal advisors to the Administrator in their respective subject areas, the Chief Scientist, Chief Information Officer, and Chief Engineer will review the Agency budget proposals and evaluate them for science, information systems, and engineering merit.

4.2.6   The final budget request transmitted to OMB reflects this decision process for the entire Agency. The budget process will be compatible with NASA's Strategic Plan. The content of the budget request describes the way in which the Administrator plans to achieve progress toward meeting the goals and objectives that appear in the NASA Strategic Plan within the multiyear funding allowance available. The Administrator approves the final 5-year budget submittal (see Figure 4–1).

4.3   Performance Planning

GPRA requires the submission of an Agency Performance Plan, following the transmittal to Congress of the President's budget. This annual Performance Plan sets out measurable goals that define what will be accomplished during a fiscal year. The goals should reflect a level of accomplishment commensurate with the resources requested and subsequently funded. For a fiscal year, at least two iterations of NASA's annual Performance Plan are prepared: an initial plan (submitted along with the NASA budget request to OMB) and a final plan that reflects budget, policy, and programmatic decisions and is consistent with the President's budget. A final plan revised to reflect congressional action on an agency's budget request is not required by GPRA, but may be submitted by NASA, if necessary, early in the new fiscal year.

Figure 4–1. Implementation: NASA's Performance and Budgeting Planning
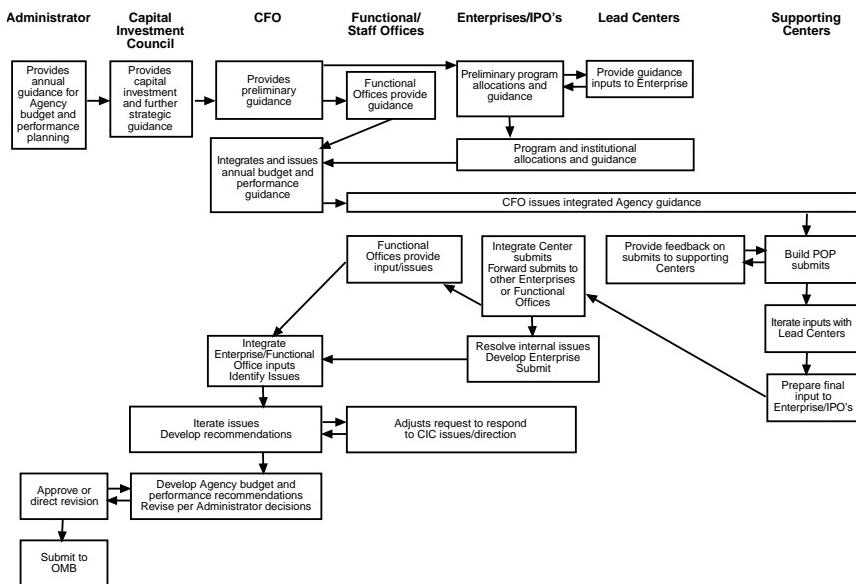
4.4   Developing and Issuing Guidance

The development of implementation guidelines flows from the approval of the Agency and Enterprise Strategic Plans and approved Functional Leadership Plans. Annually, the NASA Administrator issues guidance to the Enterprise Associate Administrators and the Functional Office Associate Administrators and Officials-in-Charge, consistent with those plans. The Strategic Enterprises and Functional Offices, in turn, translate the Administrator's guidance into a set of technical, managerial, and budgetary guidelines.

4.4.1   *Agency Guidance*

4.4.1.1   The Administrator's guidance initiates the implementation planning cycle. This guidance is developed taking into account the results of the prior-year planning cycle, new guidance from OMB, and any significant changes in the Agency's external and/or internal environment. The NASA Administrator's guidance will also be influenced by policy and budget recommendations to the President from the National Science and Technology Council and preliminary discussions with Congress. In developing NASA's POP guidance, the Administrator establishes first-order priorities for program content, also giving consideration to information received from senior management.

4.4.1.2 On behalf of the Administrator, the NASA Office of the Chief Financial Officer (CFO) integrates the budget guidance from OMB, the Administrator's guidance, the specific programmatic guidance from the Enterprises, institutional guidance from the Institutional Program Offices, and guidance from Functional Offices into the integrated NASA POP guidance. The resulting POP guidance will contain directions for preparing and submitting budget and Performance Plan data, including formats and due dates. This guidance reflects prior-year budget plans and capital investment decisions documented by the CIC. It also includes additional guidance for potential new initiatives, an investment profile for ongoing programs, performance goals, and associated metrics.

4.5   Performance and Budget Decisionmaking Process

4.5.1   *Enterprise Decisionmaking*

The Strategic Enterprises integrate program planning and resource planning during the budget process. The Enterprises make a series of preliminary program decisions in response to changes in funding, new program emphases, and ongoing performance—decisions that are reflected in the POP guidance to the Centers. Once the Enterprise offices have received their Centers' budget requirements in response to the POP call, they work with their Lead Centers to balance anticipated resources with activities identified during implementation planning. This will entail integration and adjustment of Center implementation plans with Enterprise customer requirements and expected resources. The Institutional Program Offices are responsible for forwarding funding requirements and corresponding implementation plans from the Centers to the appropriate Functional Offices. This assists the Functional Offices in identifying needs for conflicts of a functional or institutional nature. The Functional Offices are responsible for advising and making recommendations to the Institutional Program Offices on the Center budget submissions. Functional Office reviews may also be used to develop associated performance measures or indicators. Enterprise Associate Administrators then reallocate resources among programs and revise performance requirements as necessary to establish performance baselines. This integrated package of performance objectives and resource requirements is subsequently provided to the Administrator, through the Office of the Chief Financial Officer.

4.5.2   *Functional Office Implementation Planning*

Functional Office implementation planning defines activities required to implement the Functional Leadership Plans (described in Section 3.6). In collaboration with the Strategic Enterprises and Centers, the Functional Offices ensure that Agency activities are conducted in accordance with all statutory and regulatory requirements and fiduciary responsibilities.

4.5.2.1   Functional Office initiatives are efforts developed or sponsored by Functional Offices to meet new requirements, improve a current process or procedure, adapt to externally imposed mandates, or recognize evolving functional standards or trends. Such initiatives can reasonably be expected to have a significant Agencywide impact on personnel, resources, or organizations outside the Functional Office developing or sponsoring the initiative. Because the cumulative impact of functional initiatives on the Agency's program and institutional resources may be substantial, proposed functional initiatives require thorough Agency discussion and review prior to approval. The heads of Functional Offices developing initiatives likely to have a significant Agencywide impact on personnel, resources, or organizations outside the originating Functional Office must meet with the affected organization(s) to determine whether agreement on the initiative's implementation can be reached. If the affected organizations reach agreement, which must have the documented concurrence of the cognizant Institutional Program Officers and/or Officials-in-Charge, implementation shall proceed in accordance with the agreement.

4.5.2.2   If agreement is not reached, the Functional Office shall prepare a statement of need, along with an estimate of the costs and a projection of the benefits of the initiative, and submit this statement to the CIC for review. The Administrative Issues Board serves as staff to the CIC for these reviews and may, for significant initiatives, request a more detailed implementation plan, including, as appropriate, the scope, resource requirements (human, financial, and physical), a schedule, the impact on the Centers and Enterprises, the potential impact on other proposed or ongoing activities, and the expected return on investment. The Administrative Issues Board may also ask those Enterprises or Centers that do not agree to the initiative's implementation for their analyses of the impacts on resources, operations, or other Enterprise- or Center-related activities.

4.5.2.3   The CIC ensures the integration of requirements with the support of the Administrative Issues Board. The CIC also prioritizes funding to be included in the budget guidance during the annual budget development and review cycle. If the CIC supports the initiative, the CIC will recommend the proposal to the Administrator for approval and integration into NASA's budget request. The CIC may recommend to the Administrator that the proposing office create a Program Commitment Agreement, which will define the Program Management Council's review requirements. Program Commitment Agreements will be signed by the proposing office Associate Administrator or Official-in-Charge and the Administrator after formulation and prior to implementation. If the CIC does not support the initiative, the proposing Associate Administrator or Official-in-Charge may appeal directly to the Administrator.

4.5.2.4 Required initiatives originating from external requirements or from the Administrator's direction shall be reviewed by the CIC, with support from the Administrative Issues Board, for impact and implementation issues only.

4.5.3 *Agency Performance Plan and Budget Submission*

4.5.3.1 NASA's annual Performance Plan integrates the performance plans provided by the Agency's Strategic Enterprises. Consistent with GPRA requirements, this plan includes:
   a. Performance goals
   b. Level of performance to be achieved during the budget year
   c. Specific nonprogrammatic actions planned within the timeframe and fiscal scope of the proposed budget
   d. Performance indicators to measure or otherwise evaluate Agency performance

4.5.3.2 The annual goals, performance objectives, and associated information included in this plan will be grouped by Strategic Enterprise and Crosscutting Process.

4.5.3.3 Crosscutting Process performance targets and indicators must be developed and updated, if necessary, in parallel with the other performance planning activities of the Agency.

4.5.3.4 The Office of the Chief Financial Officer coordinates the integration of the Agency Performance Plan, the Enterprise Strategic Plans, and the Functional Leadership Plans with the Agency's 5-year budget. Each Enterprise or Functional Office, as appropriate, presents its recommended resources and Performance Plan targets to the CIC. The CIC supports this decision process as the principal advisory group to the Administrator in resolving Agency issues, prioritizing activities (programs, capital investments, and Functional Office initiatives), and distributing resources among the Enterprises. The CIC develops an integrated recommendation, which is then provided to the Administrator and the Senior Management Council. The Administrator's decisions, taking into account NASA's current Strategic Plan, form the basis of the Agency's 5-year budget request and Performance Plan that are to be submitted to OMB.

4.5.3.5 All program planning for the upcoming fiscal year is updated or revalidated following the submission of the Agency budget to OMB. The Enterprises work with their Lead Centers to balance anticipated resources with program and institutional planning. This may entail the adjustment of Center Implementation Plans, Program Commitment Agreements, and Program and Project Plans as necessary.

4.5.4   *Center Implementation Planning*

4.5.4.1   Center implementation planning integrates programmatic direction, resources availability, functional needs, and institutional capabilities to achieve strategic plans. The Center Implementation Plans define the relationship of the Agency and Enterprise strategic plans to the Centers' missions, Center of Excellence responsibilities, program-specific assignments, and support activities. These plans also ensure alignment of the institutional, program, and functional activities at the Centers with the Enterprise (Lead Center, Supporting Center) and functional (Principal Center) assignments. The Center Implementation Plans should be consistent with corresponding Center Program and Project Plans and coordinated during preparation with the appropriate Functional Offices. The plans must be updated as necessary to reflect current budget and program realities.

4.5.4.2   Institutional Program Offices are responsible for approving the Center Implementation Plans, with the concurrence of all Enterprise Associate Administrators associated with the Center. The Enterprise Associate Administrators approve the performance and budget decisions of their respective Centers, ensuring that the Center Implementation Plans support the Enterprise Strategic Plan and budget in force at the time they are issued. The Senior Management Council reviews the Center Implementation Plans annually.

4.6   Management and Employee Performance Planning

4.6.1   *Enterprise Associate Administrator Performance Plans*

Each Enterprise Associate Administrator's Performance Plan is executed annually, for the upcoming year, as a documented agreement between the Administrator and the respective Enterprise Associate Administrator. This planning requirement also applies to the Associate Administrator for the Office of Life and Microgravity Sciences and Applications.

4.6.2   *Functional Office Associate Administrator and Official-in-Charge Performance Plans*

A Performance Plan for each Functional Office Associate Administrator and Official-in-Charge is also executed annually, for the upcoming year, as a documented agreement between the Administrator and the respective Functional Office Associate Administrator or Official-in-Charge.

4.6.3   *Center Director Performance Plans*

Each Center Director's Performance Plan is to be executed annually as a documented agreement between Enterprise Associate Administrators/Institutional Program Officers and their respective Center Directors. This plan will include performance goals and indicators for the Center.

Concurrence of other Headquarters officials may be required if the scope of the plan is broad and as agreed between the Center Director and the Enterprise Associate Administrator.

4.6.4   *Individual Performance Plans*

All civil service NASA employees, including managers and executives, will have personal annual performance plans developed with their supervisors. These plans will not only be consistent with all pertinent NASA directives, but also explicitly support the overall strategic goals of the Agency. The performance plans will serve as the reference documents for the annual performance appraisals of all employees, managers, and executives.

4.7   Implementation in the Operating Year

4.7.1   *Preparation and Transmission of an Operating Plan*

4.7.1.1   As a part of the budget planning cycle, and in anticipation of receiving new obligational authority from congressionally enacted appropriations, the Agency prepares a draft of a detailed operating plan. This draft documents programmatic changes that have occurred since the submission of the President's budget, and it identifies any associated changes in the resources required to implement the program for the upcoming fiscal year.

4.7.1.2   After Congress enacts the Agency's appropriation for the operating year, the draft operating plan is modified to reflect any congressionally directed changes contained in the appropriations or authorization bills. This initial operating plan is then signed by the Administrator after clearance from OMB and sent to NASA's congressional committees.

4.7.2   *Appropriations or Authorization Impact on the Performance Plan*

In the event that NASA's appropriations and authorization bills require changes to the programs or program funding that, in turn, require changes to the performance targets included in the final Performance Plan for the operating year, NASA will revise the plan to reflect those changes. The revised final Performance Plan must be cleared by the Executive Office of the President prior to transmittal to Congress, after which program planning that is affected during this budget deliberation and approval process is updated.

4.7.3   *Operating Plan Adjustments*

As necessary during the period of the appropriation's availability for obligation, NASA provides notice to the Executive Office of the President and Congress of material changes in program plans and funding allocations. These notifications enable NASA to keep all parties appropriately advised of new developments and receive in return their advice and consent.

CHAPTER 5
PERFORMANCE EVALUATION

5.1   Performance Evaluation Process

Whether NASA is successful in carrying out its missions is determined by the Agency's ability to meet or surpass the goals outlined in its strategic and performance plans. NASA uses objective and verifiable performance metrics, regular management insight and review processes, or comparable tools to assess its performance at all levels—Agency, Strategic Enterprises, Functional Offices, Centers, Crosscutting Processes, programs and projects, and the individual employee. Each level participates in setting performance targets, evaluating performance against those targets, and reporting the results. If performance measures are carefully and thoughtfully chosen and applied, the annual performance evaluation becomes one of our most important ways of identifying problem areas and opportunities for better management and greater organizational effectiveness (see Figure 5–1).

5.2   Agency Annual GPRA Performance Report and Other External Reporting Requirements

5.2.1   The external reporting required by NASA's performance evaluation process is extensive. The underlying principle is that the public and elected Federal officials are entitled to assurances that appropriations

Figure 5–1. Performance Evaluation
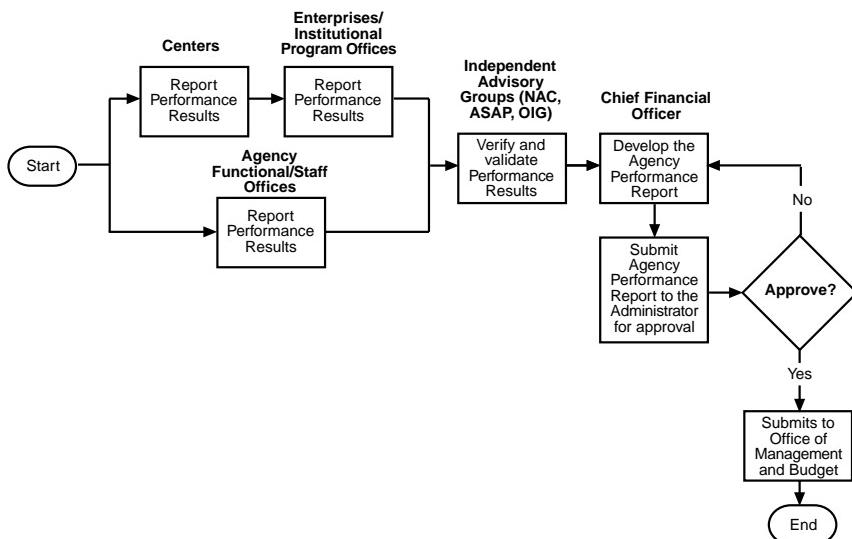
requested and received have been, and will continue to be, spent judiciously, efficiently, and effectively for approved goals and missions. Accordingly, the NASA annual Performance Report on its fiscal operations of the past fiscal year includes considerable discussion of plans accomplished and results achieved. In addition, of course, the annual budget formulation and justification process requires the linkage of performance plans to requested budgets, as well as justification for the acquisition of capital assets.

5.2.2   Information developed for NASA's performance-reporting obligations may be used as well to comply with additional reporting requirements, such as the Chief Financial Officers Act, the Federal Managers Financial Integrity Act, and the Administrator's Performance Report to the President.

5.3   External Reviews

5.3.1   Much of NASA's success in carrying out its missions results from its close working relationships with researchers in universities and other nongovernment organizations, including the National Research Council's Space Studies Board and Aeronautics and Space Engineering Board, and with industry. All of these relationships contribute to planning and evaluating NASA's exploration of space while keeping the United States on the forefront of aerospace technologies. These diverse communities understand the varied nature of NASA's challenges and are well positioned to assess its progress in meeting them. NASA also maintains a broad and diverse system of advisory committees under the Federal Advisory Committee Act, which includes the NASA Advisory Council and its subcommittees and the Aerospace Safety Advisory Panel, created by Congress. The Agency uses these advisory groups to obtain external input to its strategies and performance planning and evaluation activities.

5.3.2   Some other Federal agencies (such as the Environmental Protection Agency, the General Accounting Office, the Occupational Safety and Health Administration, and the Small Business Administration) are entrusted by Congress to assure that certain governmental activities comply with Federal laws and regulations for which those agencies have primary jurisdiction.

5. 4   Independent Validation of Performance Measures

NASA's performance measures will be subjected to independent validation by organizations, including the General Accounting Office, NASA's Office of Inspector General, and other cognizant entities. Periodic independent audits may also be conducted by outside registrars to achieve ISO 9001 certification for NASA's principal processes.

5.5 Education, Training, and Rewards in Strategic Management

The Office of Human Resources and Education develops Agency policy for employee training pertaining to the general principles of strategic management, GPRA, NASA's strategic management process, the NASA Strategic Plan, performance planning and measurement, and the importance of all employees to NASA's success. This office also develops Agency-level policy and guidance regarding awards and other forms of recognition that foster and reward exceptional employee achievements and contributions toward the accomplishment of NASA's strategic mission and performance targets.

APPENDIX A
DESIGNATED CENTER MISSION AREAS AND CENTERS OF EXCELLENCE

For the most current listings for this appendix, please refer to the online version of NPG 1000.2.

Center	Mission Area	Area(s) of Excellence
Ames Research Center	Aviation Operations Systems and Astrobiology	Information Technology
Dryden Flight Research Center	Flight Research	Atmospheric Flight Operations
Goddard Space Flight Center	Earth Science and Physics and Astronomy	Earth Science and Physics and Astronomy
Glenn Research Center	Aeropropulsion and Aerospace Power Systems Research and Technology	Turbomachinery
Jet Propulsion Laboratory	Planetary Science and Exploration and Instrument Technology	Deep Space Systems
Johnson Space Center	Human Exploration and Astro Materials	Human Operations in Space
Kennedy Space Center	Space Launch	Launch and Payload Processing Systems
Langley Research Center	Airframe Systems and Atmospheric Science	Structure and Materials
Marshall Space Flight Center	Space Transportation Systems Development, Microgravity and Space Optics, and Manufacturing Technology	Space Propulsion
Stennis Space Center	Rocket Propulsion Testing and Commercial Remote Sensing	Rocket Propulsion Testing Systems

APPENDIX B
PRINCIPAL CENTER DESIGNATIONS

For the most current listings for this appendix, please refer to the online version of NPG 1000.2.

Functional Area	Center/HQ Code
Conduct of Agency Independent Assessments and Program Evaluations	LaRC/AE
Preferred NASA Technical Standards	MSFC/AE
Engineering Excellence Initiative	MSFC/AE
Intelligent Synthesis Environment	LaRC/AF
Intelligent Systems	ARC/AF
EEE Parts and Packaging	JPL/AE
National Center for Advanced Manufacturing	MSFC/AF
IT Business Case Review	LaRC/AO
Scientific and Technical Information Program	LaRC/AO
Printing Management and Forms and Mail Officer Functions	GSFC/AO
Principal Center for Information Technology Security	ARC/AO
Principal Center for PC Workstation Hardware and Software	GRC/AO
NASA Automated Data Processing Consolidation Center (NACC)	MSFC/AO and M
Principal Center for Communications Architecture	MSFC/AO
Outsourcing Desktop Initiative for NASA (ODIN)	GSFC/AO
Sustaining Engr. Support for Agencywide Admin. Systems (SESAAS)	MSFC/AO
Agency Payroll	MSFC/B
International Travel and PCS Voucher Processing	JSC/B
Integrated Financial Management (IFM) System Contract Management	GSFC/B
IFM System Project Management	MSFC/B
IFM System Training Office	MSFC/B and F
IFM System Operations	MSFC/B
IFM System Transition Management	JSC/B
Program Oversight and Cost Estimating	LaRC/B
Earned Value Management	MSFC/B
Government Travel Charge Card Program Coordinator	LaRC/B
Contractor Financial Management Reporting (Form 533 Cost Reporting)	JSC/B
Defense Contract Administrative Service Financial Management Support	MSFC/B
Human Resources Automated Systems (NPPS, CAPPS, NTDS, CTDS)	MSFC/B and F
Drug-free Workplace Laboratory Analysis Services	KSC/F
Employee Relocation Services	KSC/F

Functional Area	Center/HQ Code
Agencywide Human Resources Operations Activities	ARC/F
Spacelink	MSFC/F
Academy of Program/Project Leadership	LaRC/F
NASA's Contracting Intern Program	KSC/H and CP
Agency BankCard Program	LaRC/H
NASA's Acquisition Internet Service (NAIS)	MSFC/H
Electronic Commerce and Integration	MSFC/H
Environmental Information Resource Management Support	GRC/JE
Recycling and Affirmative Procurement	KSC/JE
NASA Acquisition Pollution Prevention (AP2)	KSC/JE
NASA Operational Environmental Team (NOET)	MSFC/JE
NASA Online Directives Information System (NODIS)	GSFC/JM
Center Directives Management System	ARC/JM
Agencywide Travel Services Contract/Oversight	GSFC/JG
Excess Equipment Reutilization Screening	LaRC/JG
Logistics Business Systems Operations and Maintenance	MSFC/JG
Specifications Kept Intact (SPECSINTACT)	KSC/JX
Facility Project Management System (FPMS)	KSC/JX
Processing Wage Determinations	GSFC/JR
Extranet for Security Professionals	ARC/JS
Threat Analysis and Dissemination	JSC/JS
Security/Law Enforcement Standards and Training	KSC/JS
Communications Security/Electronic Key Management	KSC/JS
High Definition Television	MSFC/M
Scheduling Astronauts for Public Appearances	JSC/P
Fire Support Protection Program	KSC/Q
Software Assurance	ARC IV&V/Q
Metrology and Calibration	KSC/Q
Range Safety	KSC/Q
Non-Destructive Evaluation	LaRC/Q
Occupational Health Program	KSC/U

Center key: ARC—Ames Research Center; GSFC—Goddard Space Flight Center; GRC—Glenn Research Center; JPL—Jet Propulsion Laboratory; JSC—Johnson Space Center; KSC—Kennedy Space Center; LaRC—Langley Research Center; MSFC—Marshall Space Flight Center; and IV&V—Independent Verification and Validation.

HQ Code key: AE—Chief Engineer; AF—Chief Technologist; AO—Chief Information Officer; B—Office of the Chief Financial Officer; CP—Headquarters Human Resources Management Division; F—Office of Human Resources and Education; H—Office of Procurement; JE—Environmental Management Division; JG—Logistics Management Office; JM—Management Assessment Division; JR—Industrial Relations Officer; JS—Security Management Officer; JX—Facilities Engineering Division; M—Office of Space Flight; P—Office of Public Affairs; Q—Office of Safety and Mission Assurance; and U—Office of Life and Microgravity Sciences and Applications.

APPENDIX C
LEAD CENTER PROGRAM ASSIGNMENTS

For the most current listings for this appendix, please refer to the online version of NPG 1000.2.

Human Exploration and Development of Space

Gravitational Biology and Ecology	Ames Research Center
Biomedical Research and Countermeasures	Johnson Space Center
Advanced Human Support Technology	Johnson Space Center
Microgravity Research Center	Marshall Space Flight
Space Product Development	Marshall Space Flight Center
Space Shuttle	Johnson Space Center
International Space Station	Johnson Space Center
Space Operations	Johnson Space Center
Payload Carriers and Support	Kennedy Space Center
Rocket Propulsion Testing	Stennis Space Center
Acquisition and Management of Expendable Launch Vehicle Launch Services	Kennedy Space Center

Earth Science

Earth Observing Systems—Atmospheric Physics and Land Surfaces	Goddard Space Flight Center
Earth Observing Systems—Oceanography and Solid Earth Science)	Jet Propulsion Laboratory
Earth Observing Systems—Atmospheric Chemistry	Langley Research Center
Earth Probes—JPL	Jet Propulsion Laboratory
Earth Probes—Goddard	Goddard Space Flight Center
Earth Science Technology Program	Goddard Space Flight Center
Geostationary Operational Environmental Satellites (GOES)	Goddard Space Flight Center
Polar Operational Environmental Satellites (POES)	Goddard Space Flight Center
Commercial Remote Sensing	Stennis Space Center
New Millennium Missions EO-1/EO-2	Goddard Space Flight Center
New Millennium Program	Jet Propulsion Laboratory

Aero-Space Technology

Airframe Systems Research and Technology	Langley Research Center
Aviation System Capacity Program	Ames Research Center
Aviation Safety Program	Langley Research Center
High Performance Computing & Communication	Ames Research Center
Propulsion System Research and Technology	Glenn Research Center
Ultra Efficient Engine Technology Program	Glenn Research Center

Aviation Operation Systems Research and Technology	Ames Research Center
Flight Research Research and Technology	Dryden Flight Research Center
Information Technology Research and Technology	Ames Research Center
Rotorcraft Research and Technology	Ames Research Center
Small Business Innovation Research/ Small Business Technology Transfer Program	Goddard Space Flight Center
X-33 Advanced Technology Demonstrator	Marshall Space Flight Center
Future X-Pathfinder Program	Marshall Space Flight Center
Advanced Space Transportation Program	Marshall Space Flight Center

Space Science

Mars Exploration Robotic Missions	Jet Propulsion Laboratory
New Millennium Deep Space System Program	Jet Propulsion Laboratory
Hubble Space Telescope Program	Goddard Space Flight Center
Chandra X-Ray Observatory (CXO) Program	Marshall Space Flight Center
Gravity Probe-B (GP-B) (Relativity Mission)	Marshall Space Flight Center
Stratospheric Observatory for Infrared Astronomy (SOFIA)	Ames Research Center
Space Infrared Telescope Facility (SIRTF)	Jet Propulsion Laboratory
Cassini	Jet Propulsion Laboratory
Explorers Program	Goddard Space Flight Center
Earth-Orbiting Space Science Mission Operation, including Advanced Spacecraft for Cosmology and Astrophysics, Compton Gamma Ray Observatory, Fast Auroral Snapshot Explorer, Geotail, International Ultraviolet Explorer, Polar, Roentgen Satellite, Rossi X-ray Timing Explorer, Solar Anomalous and Magnetospheric Particle Explorer (SAMPEX), Solar and Heliospheric Observatory (SOHO), Wind, and Yohkoh	Goddard Space Flight Center
International Collaboration on Non-U.S. Physics and Astronomy Missions, including Equator-S, Cluster II, X-ray Spectroscopy Mission, International Gamma Ray Astrophysics Laboratory (INTEGRAL), ASTRO-E, and Spectrum X-Gamma	Goddard Space Flight Center

Manage Strategically Process

Integrated Financial Management Program	NASA Headquarters

APPENDIX D
NASA POLICY DIRECTIVES (NPD) AND
NASA PROCEDURES AND GUIDELINES (NPG)

The most recent versions of NASA Policy Directives and NASA Procedures and Guidelines can be found at: *http://nodis.hq.nasa.gov/Library/processes.html*

APPENDIX D

APPENDIX E
NATIONAL AERONAUTICS AND SPACE ACT OF 1958, AS AMENDED

For most recent (amended) version of the National Aeronautics and Space Act of 1958, consult: *http://www.hq.nasa.gov/office/pao/History/amendact.html*

APPENDIX F
GOVERNMENT PERFORMANCE AND
RESULTS ACT OF 1993

For the most recent version of the Government Performance and Results Act of 1993, consult: *http://www.whitehouse.gov/OMB/mgmt-gpra/*

National Aeronautics and
Space Administration

Washington, DC 20546